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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,563	03/25/2004	Jun Moroo	1341.1198	5077

21171 7590 01/02/2008

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EXAMINER	
THOMPSON, JAMES A	

ART UNIT	PAPER NUMBER
2625	

MAIL DATE	DELIVERY MODE
01/02/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/808,563	MOROO ET AL.	
	Examiner	Art Unit	
	James A. Thompson	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *3/25/04, 12/20/04, 2/12/07*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/25/04, 12/20/04, 2/12/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. **Claims 13-18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.** Claims 13-18 each recite a computer program which performs a series of steps. A computer program claimed as a computer listing *per se* is non-statutory since the computer program does not define any functional or structural inter-relationship between the computer program and other elements of the computer which permit the computer program's functionality to be realized. See MPEP § 2106.01(I). Thus, claims 13-18 are non-statutory. Examiner respectfully suggests that Applicant amend the language of claims 13-18 to recite a computer-readable medium storing a computer program which, when executed, performs the recited steps.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 6-10, 12-16 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Reed (US Patent Application Publication 2002/0164052).

Regarding claims 1, 7 and 13: Reed discloses an image data processing apparatus (figure 12a (18) and para. 52 of Reed – *apparatus is computer which executes computer program*) comprising: a dividing unit (para. 52, lines 2-4 of Reed – *corresponding portion of stored computer program*) that divides image data into a plurality of blocks (figure 9 and para. 42, lines 1-5 of Reed); an extracting unit

(para. 52, lines 2-4 of Reed – *corresponding portion of stored computer program*) that extracts a feature index of a first color component and a feature index of a second color component (figure 8 and para. 30 of Reed – *feature index of first color component and feature index of second color component indicate relative relationship of "tweak" levels established between at least one of CMY print colors and black*) in each of the blocks (para. 42, lines 8-22 of Reed – *tweaks performed and watermark embedded for each block*); a registration unit (para. 52, lines 2-4 of Reed – *corresponding portion of stored computer program*) that registers information about a correspondence between the feature index of the second color component and a change in the feature index for the first color component (para. 30, lines 1-11 of Reed – *if black color changed, CMY values altered by inverse amount*); and a code embedding unit (para. 52, lines 2-4 of Reed – *corresponding portion of stored computer program*) that embeds a predetermined code into the image data (para. 11 and para. 33 of Reed – *data, such as watermark, is embedded*), by changing the feature index of the first color component based on the feature index of the second color component, using the information registered (para 30, lines 22-25 of Reed – *tweaking performed in order to hide image data*).

Further regarding claim 7: The apparatus of claim 1 performs the method of claim 7.

Further regarding claim 13: The apparatus of claim 1 embodies a computer program (para. 52 of Reed) which performs the steps recited in claim 13.

Regarding claims 2, 8 and 14: Reed discloses that the code embedding unit embeds one code corresponding to a pair of blocks (para. 42, lines 1-5 of Reed – *watermark code embedded redundantly, and thus corresponds to at least a pair of blocks*), based on a magnitude relationship between the feature indices of color components related to the pair of blocks (para. 42, lines 15-27 and para. 43 of Reed – *magnitude of feature indices modified between blocks so that the embedding is performed consistently throughout the media*).

Regarding claims 3, 9 and 15: Reed discloses that the registration unit registers information about a correspondence between the feature index of the second color component, a difference between the feature indices of the second color component related to a pair of blocks, and the change in the feature index for the first color component (para. 42 and para. 43 of Reed – *"tweaking" relationship between black component and the CMY components used to redundantly embed watermark in plurality of blocks, difference between feature indices of second color component related to at least a pair (plurality) of blocks determined and used to produce consistent embedding throughout the media*).

Regarding claims 4, 10 and 16: Reed discloses that the first color component is a yellow component (para. 30, lines 1-11 of Reed – *tweaking of second color component (black) determines tweaking of first color component (yellow) and other color components (cyan and magenta)*).

Regarding claims 6, 12 and 18: Reed discloses a code extracting unit (para. 52, lines 2-4 of Reed – *corresponding portion of stored computer program*) that extracts the code embedded into the image data (figure 15 and para. 76 of Reed – *watermark is extracted and analyzed*).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 5, 11 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reed (US Patent Application Publication 2002/0164052) and DeProspero (US Patent Application Publication 2002/0040648).

Regarding claims 5, 11 and 17: Reed does not disclose expressly that the second color component is a magenta component. However, Reed does disclose that the tweaking can be performed such that the yellow component correlates with, but is different than, the magenta component (para. 30, lines 11-18 of Reed – *yellow and magenta combine such that luminance is maintained at constant level; if magenta component increases, yellow component decreases by predetermined amount)*.

DeProspero discloses adjusting the yellow component based on the value of the magenta component (para. 45 of DeProspero).

Reed and DeProspero are analogous art because they are from similar problem solving areas, namely the adjustment and correction of color data printed by the physical ink of one primary color through the modification of the amount of ink used for a different primary ink color. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to adjust the value of yellow based on the value of magenta, as taught by DeProspero. Thus, the second color component is a magenta component. Reed already teaches that magenta and yellow can be set with respect to each other. Modifying Reed with respect to the teachings of DeProspero would simply require that magenta and

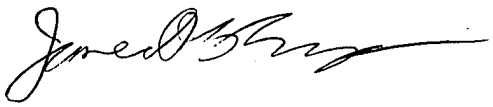
yellow are adjusted in opposition with each other, rather than in joint opposition to the black ink. The motivation for doing so would have been to compensate for the physical limitations of the printed colors, which are not always pure colors when physically printed (para. 44-45 of DeProspero – *different shades and qualities of varying desirability are used for magenta*). Therefore, it would have been obvious to combine DeProspero with Reed to obtain the invention as specified in claims 5, 11 and 17.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Thompson whose telephone number is 571-272-7441. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



James A. Thompson
Examiner
Technology Division 2625

18 December 2007